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(c) When the lubricator is initially installed on the well, it shall be successfully pressure tested to the expected shut-in surface pressure.

[53 FR 10690, Apr. 1, 1988. Redesignated and amended at 63 FR 29479, 29485, May 29, 1998]

Subpart G—Abandonment of Wells

§ 250.700 General requirements.

(a) The lessee shall abandon all wells in a manner to assure downhole isolation of hydrocarbon zones, protection of freshwater aquifers, clearance of sites so as to avoid conflict with other uses of the Outer Continental Shelf (OCS), and prevention of migration of formation fluids within the wellbore or to the seafloor. Any well which is no longer used or useful for lease operations shall be plugged and abandoned in accordance with the provisions of this subpart. However, no production well shall be abandoned until its lack of capacity for further profitable production of oil, gas, or sulphur has been demonstrated to the satisfaction of the District Supervisor. No well shall be plugged if the plugging operations would jeopardize safe and economic operations of nearby wells, unless the well poses a hazard to safety or the environment.

(b) Lessees must plug and abandon all well bores, remove all platforms or other facilities, and clear the ocean of all obstructions to other users. This obligation:

(1) Accrues to the lessee when the well is drilled, the platform or other facility is installed, or the obstruction is created; and

(2) Is the joint and several responsibility of all lessees and owners of operating rights under the lease at the time the obligation accrues, and of each future lessee or owner of operating rights, until the obligation is satisfied under the requirements of this part.

[53 FR 10690, Apr. 1, 1988, as amended at 62 FR 27955, May 22, 1997. Redesignated at 63 FR 29479, May 29, 1998]

§ 250.701 Approvals.

The lessee shall not commence abandonment operations without prior approval of the District Supervisor. The

lessee shall submit a request on Form MMS-124, Sundry Notices and Reports on Wells, for approval to abandon a well and a subsequent report of abandonment within 30 days from completion of the work in accordance with the following:

(a) *Notice of Intent to Abandon Well.* A request for approval to abandon a well shall contain the reason for abandonment including supportive well logs and test data, a description and schematic of proposed work including depths, type, location, length of plugs, the plans for mudding, cementing, shooting, testing, casing removal, and other pertinent information.

(b) *Subsequent report of abandonment.* The subsequent report of abandonment shall include a description of the manner in which the abandonment or plugging work was accomplished, including the nature and quantities of materials used in the plugging, and all information listed in paragraph (a) of this section with a revised schematic. If an attempt was made to cut and pull any casing string, the subsequent report shall include a description of the methods used, size of casing removed, depth of the casing removal point, and the amount of the casing removed from the well.

[53 FR 10690, Apr. 1, 1988, as amended at 58 FR 49928, Sept. 24, 1993. Redesignated at 63 FR 29479, May 29, 1998]

§ 250.702 Permanent abandonment.

(a) *Isolation of zones in open hole.* In uncased portions of wells, cement plugs shall be set to extend from a minimum of 100 feet below the bottom to 100 feet above the top of any oil, gas, or freshwater zones to isolate fluids in the strata in which they are found and to prevent them from escaping into other strata or to the seafloor. The placement of additional cement plugs to prevent the migration of formation fluids in the wellbore may be required by the District Supervisor.

(b) *Isolation of open hole.* Where there is an open hole below the casing, a cement plug shall be placed in the deepest casing by the displacement method and shall extend a minimum of 100 feet above and 100 feet below the casing shoe. In lieu of setting a cement plug

across the casing shoe, the following methods are acceptable:

(1) A cement retainer and a cement plug shall be set. The cement retainer shall have effective back-pressure control and shall be set not less than 50 feet and not more than 100 feet above the casing shoe. The cement plug shall extend at least 100 feet below the casing shoe and at least 50 feet above the retainer.

(2) If lost circulation conditions have been experienced or are anticipated, a permanent-type bridge plug may be placed within the first 150 feet above the casing shoe with a minimum of 50 feet of cement on top of the bridge plug. This bridge plug shall be tested in accordance with paragraph (g) of this section.

(c) *Plugging or isolating perforated intervals.* A cement plug shall be set by the displacement method opposite all perforations which have not been squeezed with cement. The cement plug shall extend a minimum of 100 feet above the perforated interval and either 100 feet below the perforated interval or down to a casing plug, whichever is the lesser. In lieu of setting a cement plug by the displacement method, the following methods are acceptable, provided the perforations are isolated from the hole below:

(1) A cement retainer and a cement plug shall be set. The cement retainer shall have effective back-pressure control and shall be set not less than 50 feet and not more than 100 feet above the top of the perforated interval. The cement plug shall extend at least 100 feet below the bottom of the perforated interval with 50 feet placed above the retainer.

(2) A permanent-type bridge plug shall be set within the first 150 feet above the top of the perforated interval with at least 50 feet of cement on top of the bridge plug.

(3) A cement plug which is at least 200 feet long shall be set by the displacement method with the bottom of the plug within the first 100 feet above the top of the perforated interval.

(d) *Plugging of casing stubs.* If casing is cut and recovered leaving a stub, the stub shall be plugged in accordance with one of the following methods:

(1) A stub terminating inside a casing string shall be plugged with a cement plug extending at least 100 feet above and 100 feet below the stub. In lieu of setting a cement plug across the stub, the following methods are acceptable:

(i) A cement retainer or a permanent-type bridge plug shall be set not less than 50 feet above the stub and capped with at least 50 feet of cement, or

(ii) A cement plug which is at least 200 feet long shall be set with the bottom of the plug within 100 feet above the stub.

(2) If the stub is below the next larger string, plugging shall be accomplished as required to isolate zones or to isolate an open hole as described in paragraphs (a) and (b) of this section.

(e) *Plugging of annular space.* Any annular space communicating with any open hole and extending to the mud line shall be plugged with at least 200 feet of cement.

(f) *Surface plug.* A cement plug which is at least 150 feet in length shall be set with the top of the plug within the first 150 feet below the mud line. The plug shall be placed in the smallest string of casing which extends to the mud line.

(g) *Testing of plugs.* The setting and location of the first plug below the surface plug shall be verified by one of the following methods:

(1) The lessee shall place a minimum pipe weight of 15,000 pounds on the cement plug, cement retainer, or bridge plug. The cement placed above the bridge plug or retainer is not required to be tested.

(2) The lessee shall test the plug with a minimum pump pressure of 1,000 pounds per square inch with a result of no more than a 10-percent pressure drop during a 15-minute period.

(h) *Fluid left in hole.* Each of the respective intervals of the hole between the various plugs shall be filled with fluid of sufficient density to exert a hydrostatic pressure exceeding the greatest formation pressure in the intervals between the plugs at time of abandonment.

(i) *Clearance of location.* All wellheads, casings, pilings, and other obstructions shall be removed to a depth of at least 15 feet below the mud

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line or to a depth approved by the District Supervisor. The lessee shall verify that the location has been cleared of all obstructions in accordance with § 250.704 of this part. The requirement for removing subsea wellheads or other obstructions and for verifying location clearance may be reduced or eliminated when, in the opinion of the District Supervisor, the wellheads or other obstructions would not constitute a hazard to other users of the seafloor or other legitimate uses of the area.

(j) *Requirements for permafrost areas.* The following requirements shall be implemented for permafrost areas:

(1) Fluid left in the hole adjacent to permafrost zones shall have a freezing point below the temperature of the permafrost and shall be treated to inhibit corrosion.

(2) The cement used for cement plugs placed across permafrost zones shall be designed to set before freezing and to have a low heat of hydration.

[53 FR 10690, Apr. 1, 1988. Redesignated and amended at 63 FR 29479, 29485, May 29, 1998]

§ 250.703 Temporary abandonment.

(a) Any drilling well which is to be temporarily abandoned shall meet the requirements for permanent abandonment (except for the provisions in §§ 250.702 (f) and (i), and 250.704) and the following:

(1) A bridge plug or a cement plug at least 100 feet in length shall be set at the base of the deepest casing string unless the casing string has been cemented and has not been drilled out. If a cement plug is set, it is not necessary for the cement plug to extend below the casing shoe into the open hole.

(2) A retrievable or a permanent-type bridge plug or a cement plug at least 100 feet in length, shall be set in the casing within the first 200 feet below the mud line.

(b) Subsea wellheads, casing stubs, or other obstructions above the seafloor remaining after temporary abandonment will be protected in such a manner as to allow commercial fisheries gear to pass over the structure without damage to the structure or fishing gear. Depending on water depth, nature and height of obstruction above the seafloor, and the types and periods of fishing activity in the area, the Dis-

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trict Supervisor may waive this requirement.

(c) In order to maintain the temporarily abandoned status of a well, the lessee shall provide, within 1 year of the original temporary abandonment and at successive 1-year intervals thereafter, an annual report describing plans for reentry to complete or permanently abandon the well.

(d) Identification and reporting of subsea wellheads, casing stubs, or other obstructions extending above the mud line will be accomplished in accordance with the requirements of the U.S. Coast Guard.

[53 FR 10690, Apr. 1, 1988. Redesignated and amended at 63 FR 29479, 29485, May 29, 1998]

§ 250.704 Site clearance verification.

(a) The lessees shall verify site clearance after abandonment by one or more of the following methods as approved by the District Supervisor:

(1) Drag a trawl in two directions across the location,

(2) Perform a diver search around the wellbore,

(3) Scan across the location with a side-scan or on-bottom scanning sonar, or

(4) Use other methods based on particular site conditions.

(b) Certification that the area was cleared of all obstructions, the date the work was performed, the extent of the area searched around the location, and the search method utilized shall be submitted on Form MMS-124.

[53 FR 10690, Apr. 1, 1988, as amended at 58 FR 49928, Sept. 24, 1993. Redesignated at 63 FR 29479, May 29, 1998]

Subpart H—Oil and Gas Production Safety Systems

§ 250.800 General requirements.

Production safety equipment shall be designed, installed, used, maintained, and tested in a manner to assure the safety and protection of the human, marine, and coastal environments. Production safety systems operated in sub-freezing climates shall utilize equipment and procedures selected with consideration of floating ice, icing, and